included into the final model of clearance rate between compartments. After invalidation, the parameter estimates of final model were close to the parameter mean of Bootstrap, and included in the 95% confidence interval.
Conclusions: (1) Amlodipine can increased tacrolimus steady-state C/D and $AUC_{0\text{-}12\ h}$ of PTH patients significantly. (2) CYP3A5*3 gene polymorphism and hematocrit are key influence factors of tacrolimus clearance. Amlodipine is key influence factor of tacrolimus clearance rate between compartments.

GW25-e5354

Relationship between Nocturnal Blood Pressure and Left Ventricular Hypertrophy in Hypertensive Patients

Xue Hao, Hao Xue, Guoshu Liu
Chinese People's Liberation Army General Hospital

Objectives: Left ventricular hypertrophy (LVH) is the most common target organ damage in hypertension. However, the association of LVH and circadian rhythm of blood pressure (BP) is unknown. The objective of the present study was to explore the relationship between circadian rhythm of BP and LVH using ambulatory blood pressure monitoring (ABPM).
Methods: A total of 325 untreated hypertensive patients were recruited. The patients were divided into two groups: hypertensive patients with LVH (n=121) and without LVH (n=204). Twenty-four-hour ABPM was performed in all the patients to collect the following parameters: 24-hour average systolic and diastolic pressure, daytime average systolic and diastolic pressure, nocturnal average systolic and diastolic pressure, and night to day BP ratio. The relationship between LVH and the various ABPM parameters was analyzed.
Results: We found that the average nocturnal systolic blood pressure (SBP) in hypertensive patients with LVH was higher than that in hypertensive patients without LVH (145±16.1 mmHg vs 136±12. 7mmHg, P<0.05). The average night to day SBP ratio in hypertensive patients with LVH was also higher than that in hypertensive patients without LVH (0.93±0.04 vs 0.86±0.04, P<0.05). Multiple regression analysis indicate that the average nocturnal SBP and the night to day SBP ratio were associated with LVH (Odds ratio (OR) 1.67, 95% CI 1.31-3.21; OR: 1.88, 95% CI 1.56-3.78) by adjustment for traditional covariates.
Conclusions: The average nocturnal SBP and the average night-day SBP ratio are independent risk factors of LVH in patients with hypertension.

GW25-e0608

The effects of renal artery diameter in patients with resistant hypertension by renal sympathetic denervation

Xu Youlong, Jin Huigen, Gao Junqing, Yan Penyong, Zhang Wenquan, Wang Mingyu, Liu Zongjun
Department of Cardiology, The Putuo Affiliated Hospital of Shanghai University of Traditional Chinese Medicine

Objectives: Catheter-based renal sympathetic denervation (RDN) was introduced as a novel interventional technique in recent years, which could simultaneously block the renal artery afferent and efferent nerve fibers and showed remarkable therapeutic effects in the treatment of resistant hypertension. In our study, we attempted to use the QCA system to evaluate the changing about diameter of renal artery after the RDN immediately.
Methods: 16 patients with resistant hypertension were enrolled and all of them were accepted the RDN. We used the QCA system to evaluate the diameter of renal artery before and after the RDN immediately (the renal artery diameter about 2-3 mm were selected in each patient for measurement).
Results: All of the 16 patients were successfully completed the RDN. No stenosis was observed in all renal arteries. The result showed that dilation of all patients' renal arteries could be observed, and compared with the diameter before RDN, there was significant difference (2.5±0.4 mm vs 3.1±0.5 mm, P<0.001, the changing rate was 24%).
Conclusions: The renal sympathetic denervation could induce the dilation of renal artery diameter immediately.

GW25-e0782

Association between plasma aldosterone with KCNJ5 gene polymorphisms in primary hypertension patients

Wang Huan, Weng Chunfa, Chen Hui
Hypertension Laboratory, Fujian Provincial Cardiovascular Disease Institute, Provincial Clinical College of Fujian Medical University

Objectives: To investigate the association between plasma aldosterone (ALD) witn KCNJ5 (rs2604204) gene polymorphisms in primary hypertension patients.
Methods: 229 new diagnosed primary hypertensive patients without any antihypertensive agents had been selected from October 2011 to January 2014 in the hypertension laboratory of Fujian provincial cardiovascular disease institute. Hypertension patients were divided into two groups depended on the median of ALD (183.18 ng/l): high ALD group (n=114) and control group (n=115). Clinical data, serum biochemical, rennin-angiotensin-aldosterone, cortisol, ambulatory blood pressure and echocardiography data were recorded. Polymerase chain reaction (PCR) was used to characterize KCNJ5 (rs2604204) genotypes (A/C).
Results: (1) The frequency of different genotypes of KCNJ5 (rs2604204) were in accordance with Hardy-Weinberg equilibrium in our study (P>0.05). (2) Clinical characteristics:Compared with control group, the triglyceride (TG), uric acid (UA), insulin, insulin resistance index, renin, angiotensin I, angiotensin II, cortisol, 24hSBP, dSBP, SD (PD), SD (PS), left ventricular mass index (LVMI) were high in high ALD group (P<0.05). The gender, age, height, weight, BMI, waist circumference, total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), high-density lipoprotein cholesterol (HDL-C), fasting blood glucose (FBG), glycosylated hemoglobin A1c (HbA1c), sodium, potassium, 24h DBP, dDBP, nSBP, nDBP showed no significant difference between two groups. (3) Gene polymorphisms: Compared with control group, the distribution frequency of AC and CC genotypes of KCNJ5 gene were more in high ALD group (x^2=10.93,P=0.004),and C allelic frequency was also more in high ALD group (x^2=9.78, P=0.002). There was no significant difference between AC and CC genotypes of two groups. Compared with hypertensive patients with AA genotype, patients with C allelic showed increased high ALD risk (x^2=9.808, OR=2.36 95% CI 1.380-4.049, P=0.002). (4) Analysis of the risk factors of high ALD: After adjusting the TG, UA, cortisol, insulin, insulin resistance index, renin, angiotensin I, angiotensin II, cortisol, 24h SBP, dSBP, SD (PD), SD (PS), LVMI, logistic regression analysis showed that KCNJ5 genotype, angiotensin II, cortisol, dSBP entered into the regression equation, compared with hypertensive patients with AA genotype, hypertensive patients with C allelic showed increased high ALD risk (OR=2.33, 95% CI 1.255-4.353, P=0.007).
Conclusions: The KCNJ5 (rs2604204) gene C allelic might be a susceptibility factor to the high ALD in primary hypertensive patients. Angiotensin II, cortisol, dSBP are related to the high ALD in primary hypertensive patients.
The natural science foundation of Fujian Province (No: 2014Y01010261)

GW25-e1139

Effects of Bushen Hemai Prescription for Senile ISH: a randomised, single-blind trial

Feng Lu, Qing Huo, Zhen Wang, Yang Liu, Yuehua Jiang, Chuanhua Yang
Affiliated Hospital of Shandong University of Traditional Chinese Medicine

Objectives: To evaluate the curative effect of Bushen Hemai Prescription combined with antihypertensive chemical medicine on the control rate of systolic blood pressure (SBP), pulse pressure (PP) and left ventricular hypertrophy (LVH) in senile isolated systolic hypertension (ISH) patients.
Methods: It was designed as multi-center clinical research (5 medical centers) of completely randomized, single blind and parallel blank control. After 2 weeks of introduction period, 286 cases of aged over 60 years, with more than 15-20 years duration and PP ≥60 mmHg (≥8 kPa) were enrolled and were divided into the control group (n=144) and the experimental group (n=142). During the observation period of 24 weeks, patients were allocated with chemical medicine (Amlodipine + Indapamide) and combination therapeutic regimen (Bushen Hemai Prescription combined with Amlodipine + Indapamide). 24 h ambulatory blood pressure parameters were monitored according to the British Oxford Medliog ambulatory blood pressure analysis system. Left ventricular end diastolic diameter (LVEDd), interventricular septal thickness (IVSTDd) and left ventricular posterior wall thickness (PWTDd) of 3-5 continuous heartbeat cycle were determined by GEVivid 7 PRO color Doppler ultrasound diagnostic instrument. Left ventricular mass (LVM), left ventricular mass index (LVMI) and relative wall thickness (RWT) were calculated according to the Devercux formula.
Results: After therapy, analysis of the control rate of SBP and PP was 45.14% (control group) and 74.32% (experimental group) by chi square test of FAS analysis, P<0.01, and 48% (control group) and 74.96% (experimental group) by chi square test of PPS analysis, P<0.01. The efficiency analysis of circadian rhythms was 25.93% (control group) and 47.06% (experimental group) by chi square test of FAS analysis, P<0.01, and 25% (control group) and 46.39% (experimental group) by chi square test of PPS analysis, P<0.01. Ultrasonic Beckoning graph showed that data about LVH were decreased in both two groups after treatment. LVM and LVMI were decreased significantly in experimental group than in control group (P<0.01), suggesting cardiac diastolic function was improved more significantly. There is no central difference of each data among the 5 medical centers by Breslow-Day test, P>0.05.

In the process of study, the incidence of adverse events was 2.08% (A group) and 0% (B group), demonstrating no statistically significance difference between groups by corrected chi square test, P>0.05. And none was serious adverse event.
Conclusions: Combination therapeutic regimen (Bushen Hemai Prescription combined with Amlodipine + Indapamide) could more effectively control 24h blood pressure, improve the control rate of systolic blood pressure (SBP), pulse pressure (PP) and improve left ventricular diastolic function, reverse concentric LVH in senile isolated systolic hypertension (ISH) patients. This combination therapeutic regimen may bring a greater long-term benefit to senile ISH patients.

GW25-e2311

Antihypertensive Efficacy of Renal Denervation for Resistant Hypertension Evaluated by Ambulatory Blood Pressure Monitoring: A Systemic Review and Meta-Analysis

Zhuang Xiaodong, Liao Xinxue, Du Zhimin
First Affiliated Hospital, Sun Yat-Sen University

Objectives: Renal denervation (RDN) emerges as a potential adjunct in the treatment of resistant hypertension (RH) with limited data. We aim to evaluate the efficacy of RDN mainly by ambulatory blood pressure monitoring (ABPM).